

CLIMATOLOGICAL DATA FOR NOVEMBER, 1911.

DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

Moderate temperatures prevailed during the first decade, but from the 11th to 14th a cold wave overspread the district, giving temperatures near freezing southward to the Gulf coast. From the 15th to 26th temperatures were again moderate, but from the 27th to 30th another cold wave overspread the district, giving minimum temperatures of 20° to 30° on the Gulf coast. Precipitation was in the form of rain over the southern and principally snow over the western portion of the district.

TEMPERATURE.

Mean temperatures were below the normal over the entire district, the deficiency ranging from 1.4° over southern Louisiana to 7.2° in the mountains of Colorado. The warmest weather occurred on the 11th, except in the Colorado area, where the monthly maximum occurred at many stations on the 15th or 16th. Maximum temperatures were above 80° in all parts of the district, except in the Colorado and New Mexico areas, where they were between 70° and 80°. The monthly maximum readings at many stations in the southern portion of the district were the highest of record for November. The highest temperature recorded was 94° at Plain Dealing, La. The lowest temperatures occurred generally on the 28th, 29th, or 30th. Minimum temperatures were below 32° over the entire district, and they were below zero in parts of Oklahoma, and the Colorado, New Mexico, and Kansas areas. The lowest temperature recorded was -23° at Westcliffe, Colo., and Elizabethtown, N. Mex.

Monthly mean temperatures and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 33.1°, -4.4°; New Mexico area, 37.6°, -5.0°; Texas area, 45.6°, -3.3°; Kansas area, 42.2°, -4.0°; Oklahoma, 45.6°, -4.4°; Missouri area, 42.3°, -4.8°; Tennessee area, 45.8°, -3.9°; Arkansas, 46.8°, -4.2°; Mississippi area, 50.3°, -4.2°; Louisiana, 55.5°, -3.2°.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—Less than the normal precipitation occurred over this drainage area, except in parts of Colorado, Kansas, and Arkansas. Over the headwaters of the Arkansas River in Colorado, the average precipitation from 32 stations was 0.95 inch, about 0.1 inch above the normal. Over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma, the average from 39 stations was 1.01 inches, about 0.3 inch below the normal. The average from 14 stations in the Cimarron Valley was 0.79 inch, about 0.6 inch below the normal. The precipitation was uniformly

light over the Canadian Valley. Over the headwaters of this valley in New Mexico, the amounts from 37 stations averaged 0.45 inch, about 0.3 inch below the normal. Very little precipitation occurred in some localities over those portions of the Canadian Valley that lie in Texas and Oklahoma, where the amounts from 29 stations averaged 0.85 inch, about 1.10 inches below the normal. The average precipitation from 10 stations in the Verdigris Valley was 1.17 inches, about half an inch below the normal. Heavy precipitation occurred over the headwaters of the Neosho Valley in Missouri, but through Kansas the amounts were generally small, the average from 16 stations being 1.88 inches, about 0.3 inch above the normal. Over the Arkansas Valley below the Oklahoma-Arkansas line the amounts from 14 stations averaged 3.21 inches, about 0.4 inch below the normal.

Red River and tributaries.—Very little precipitation occurred over the portions of this valley that lie in New Mexico, Texas, and Oklahoma, where the amounts from 40 stations averaged 0.87 inch, about 1.2 inches below the normal. Over those portions of the valley below the Texas-Arkansas line the amounts from 18 stations averaged 3.95 inches, about 0.2 inch above the normal.

Mississippi River south of St. Louis and small tributaries.—The precipitation was unevenly distributed over this drainage area, being heavy in some localities and light in others. In the immediate Mississippi Valley the amounts from 41 stations averaged 3.92 inches, about 0.2 inch above the normal. Over the valley of the Meramec, there was an excess of about half an inch. The average from 22 stations in the White River Valley was 3.19 inches, about 0.3 inch below the normal. The precipitation was, as a rule, uniformly distributed over the Yazoo Valley, where the amounts from 28 stations averaged 3.60 inches, about 0.2 inch above the normal. The precipitation was heavy over the valley of the Big Black, where the average was 4.27 inches, about 1.4 inches above the normal. Over the Ouachita Valley the precipitation from 17 stations averaged 3.41 inches, about the normal amount.

Louisiana coastal plain.—The precipitation was unevenly distributed over this drainage area, the average from 33 stations being 3.98 inches, about 0.7 inch above the normal.

Monthly precipitation and departures from the normal for the various States and parts of States (in inches) are reported as follows: Colorado area 0.93, +0.02; New Mexico area, 0.43, -0.28; Texas, area, 0.92, -1.07; Kansas area, 1.01, -0.12; Oklahoma, 0.90, -1.19; Missouri area, 3.05, +0.01; Tennessee area, 4.86, +0.12; Arkansas, 3.18, -0.46; Mississippi area, 3.92, +0.75; Louisiana, 4.13, +0.55.

SNOWFALL.

There was considerable snowfall over the northern and western portions of the district, the amounts ranging from a trace to 54 inches, and a trace of snow was reported as far south as Baton Rouge, La. However, the snow over the regions east of Colorado did not remain long on the ground. In the Colorado area weather conditions in the mountains have been favorable for the water supply. During the month the precipitation was in the form of snow, and, although it was unevenly distributed, the amount, as a whole, was greater than usual. There was an excess in Lake, Huerfano, and Las Animas Counties, and in the northern part of Chaffee County. The average depth on the ground at the close of the month, at a mean elevation of 9,600 feet, was 9.4 inches. In the New Mexico area the snowfall was much below the normal, and conditions thus far have not been favorable for the storage of snow in the gulches.

RIVERS.

The Arkansas River was low throughout the month. In Arkansas the stages were so low that navigation was suspended.

In Oklahoma there were no floods and river stages changed but little.

Only slight changes occurred in the Red River and stages were very low.

The White River was considerably lower than usual, and navigation was practically at a standstill in the upper reaches.

Below St. Louis the Mississippi fell slowly during the first and second decades and rose slightly during the third decade.

NOTES.

Arkansas (H. F. Alciatore, section director).—This was the coldest November experienced in Arkansas in 17 years. The most noteworthy feature of the weather was the occurrence of the cold wave.

Oklahoma (J. Pemberton Slaughter, section director).—Destructive wind and sand storms occurred in some of the western counties. The subsoil is deficient in moisture, especially in the central and western counties; however, the top soil is generally moist and wheat is in fair condition.

FREEZES OF NOVEMBER 13 AND 29-30, 1911, IN THE SUGAR, ORANGE, AND TRUCKING REGION.

By I. M. CLINE, District Forecaster.

Two unusually severe freezes, for the season of the year, occurred in the sugar and trucking regions of Louisiana and Texas during November, 1911. The first freeze occurred on the 13th, and gave temperatures of 26° to 30° over the sugar region, being the coldest weather on record experienced so early in the season. The cane crop was very large and it had matured slowly. Many planters had not put down seed cane and consequently, the approach of such a freeze foreboded much damage to the sugar interests. Advices were received from the central office at 2 p. m., ninetieth meridian time, on November 11 extending cold wave warnings to Little Rock, Shreveport, and Palestine, and giving a special report from Dodge City, Kans. The report from Dodge City in connection with the rapid changes which were taking place at New Orleans indicated an exceedingly rapid movement southward of the cold wave, and on

account of the condition of the cane crop a message was telegraphed to the central office recommending that cold-wave warnings be extended to Taylor and San Antonio, Tex., and freezing warnings be issued for the sugar regions of Louisiana and Texas. Authority to issue such warnings was received at 4 p. m., November 11, and the following messages were distributed:

Saturday, November 11.—“East Texas: Cold wave in the interior of south portion; freezing is indicated for the sugar region; temperature will fall to 28° by Sunday night.” “Southern Louisiana: Freezing is indicated for sugar region; temperature may fall to 28° by Monday.”

Sunday, November 12.—“Texas and Louisiana: Temperature will be 24° to 28° in the sugar and trucking region Monday.”

Notwithstanding that the day following the issuance of the warning was Sunday, planters put forth extraordinary efforts and much seed cane was saved, and many planters windrowed their cane as a precaution against a cane-splitting freeze. The temperature fell as low as 26° to 30° in the sugar, orange, and trucking region, but the cold was of short duration and the cane was not split. Seed cane of great value for the coming crop was saved, which without the warning would have been lost, and truck farmers protected and saved their crops.

The freeze of November 29 and 30, 1911, gave temperatures of 19° to 26° throughout the sugar, orange, and trucking region, the cold weather continuing for several days. At New Orleans, the lowest temperature during the freeze was 31°, only 2° higher than the previous lowest temperature of record in November, 29° on November 19, 1903. In the country surrounding New Orleans, however, the radiation was intense and the minimum temperatures were 8° to 14° lower than at New Orleans, and 2° to 4° lower than any temperature previously recorded in the sugar, orange, and trucking regions so early in the season. Timely warnings were issued for these freezes as follows:

Monday, November 27.—“Louisiana: To-night, rain, colder; Tuesday, fair preceded by rain on the coast; cold wave; temperature will be freezing in north and central portions and 32° to 36° in south portion.”

“East Texas: To-night, rain or snow in north portion, rain in south portion; much colder; cold wave; temperature will be 24° to 30° in north portion and 32° to 36° in south portion.”

Tuesday, November 28.—“Louisiana: To-night, fair, colder; freezing to coast, with temperature 24° to 28° in sugar and trucking regions.” “East Texas: To-night, fair; somewhat colder, except in extreme northwest portion; freezing almost to coast, with temperature 26° to 30° in sugar and trucking regions.”

Wednesday, November 29.—“Louisiana and east Texas: To-night, fair; probably freezing to coast; temperature will be 24° to 28° in sugar and trucking regions.”

These warnings were given the widest possible distribution. In addition to the regular distribution at Government expense, several sugar planters and orange growers have warnings for temperatures below 30° telegraphed or telephoned to them at their expense in order to get the information at the earliest possible moment. The warnings issued on November 27, 28, and 29 enabled sugar, orange, and truck growers, who had made preparation to act on advices from this bureau, to protect and save their crops to the value of several millions of dollars which otherwise would have been lost. Sugar planters protected their cane by windrowing. Orange growers smudged their orchards and not only saved the trees from damage but saved the ripe fruit on the trees. Truck growers covered, smudged, and flooded their crops.

In order to enable the writer to study the freeze and effects on crops in connection with the forecast work, the recipients of the warnings were asked for reports relative to the effects of the freeze in their localities, and

MONTHLY WEATHER REVIEW.

NOVEMBER, 1911

TABLE 1.—*Climatological data for November, 1911. District No. 7—Continued.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Sky.	Prevailing wind direction.	
Louisiana—Contd.																		
Rayne.....	Acadia.....	44	19	57.6	— 3.1	86	10†	20	30	45	3.44	— 0.47	1.00	0	12	16	n.	A. P. McNeil.
Reserve.....	St. John Baptist.....	10	58.6	— 0.3	92	17	24	30	48	2.91	+ 0.88	2.12	0	4	15	11	4	Leon Godchaux Co., Ltd.
Robeline.....	Natchitoches.....	147	15	51.8	— 4.5	86	10	15	30	44	4.47	+ 0.97	2.15	0	4	14	2	Ruby McCook.
Ruston.....	Lincoln.....	312	16	57.2*	— 0.2	86	16†	22	11†	60*	3.40	— 0.57	1.80	0	2	25	1	R. A. Clampet.
St. Francisville.....	West Feliciana.....	115	8	54.6	81	20	22	30	47	3.09	1.37	0	3	13	4	L. P. Kilbourne.
Schriever.....	Terrebonne.....	17	19	59.2	— 1.9	89	10	24	30	50	4.27	+ 1.46	2.28	0	5	18	3	Harriet F. Riveire.
Sheridan.....	Washington.....	1	55.6	.....	84	11	19	30	45	3.05	.....	1.27	0	6	14	6	D. A. Self.
Shreveport.....	Caddo.....	249	40	52.4	— 2.9	83	11	22	29	41	2.66	— 1.42	1.13	0	8	14	5	U. S. Weather Bureau.
Simmesport.....	Avoyelles.....	42	5	.....	.....	.....	.....	.....	.....	5.32	.....	2.13	0	9	0	4	C. T. Leigh.
So. University Farm.....	Jefferson.....	14	.....	.....	.....	.....	.....	.....	.....	4.33	+ 1.73	2.75	0	6	17	5	F. L. St. Martin.
Sugartown.....	Calcasieu.....	18	56.4	— 2.1	83	11†	25	30	31	6.81	+ 2.89	2.30	0	5	4	23	G. W. Richardson.	
Tallulah.....	Madison.....	91	4	49.81	.....	85	6	17	30	49 ¹	3.03	.....	2.30	0	3	.....	Neal T. Halt.
Walker.....	Livingston.....	1	55.6	.....	85	17	20	29	47	4.28	.....	1.60	0	5	10	5	H. C. Fondren.
Winnsboro.....	Franklin.....	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	J. C. Carlton.

*, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

